

Name: _____

Lab Time: _____

Multiple Choice Circle the letter in front of the most correct answer to each of the questions below:

1. (10%) Which of the following explicitly demonstrates **exception propagation**?
 - a. A new type of exception extending a class in the exception class hierarchy
 - b. An exception being thrown to the calling method**
 - c. Two or more exceptions happening simultaneously
 - d. Handling an exception in a try-catch statement
 - e. The finally clause being executed in a try-catch statement

2. (10%) If a single exception occurs in a program and is not handled in a try-catch statement, which type of error occurs? **[Assume an unchecked exception; otherwise program will not compile.]**
 - a. A compile-time error
 - b. A run-time error**
 - c. A logic error
 - d. A style error
 - e. The program compiles and executes with no error

3. (10%) If a **checked** exception could occur in the connectServer method and it is not handled in the body of the method, then the _____ reserved word **must** be used when defining connectServer.
 - a. throw
 - b. try
 - c. catch
 - d. throws**
 - e. finally

Fill in the blank / Code completion

4. (20%) Suppose that *xStr* is a String obtained from the user via standard input. Add code around the line below so that “Invalid number input!” is printed to standard output if a NumberFormatException is thrown by parseDouble. You can use any variable name for the NumberFormatException.

```
Try {  
    double xLoc = Double.parseDouble(xStr);  
}  
Catch (NumberFormatException e) {  
    System.out.println("Invalid number input!");  
}
```

5. (10%) If a new exception is defined, it must inherit from the _____ class or one of its descendants.

Answer: Exception

6. (15% total) Modify the following constructor so that an `IllegalArgumentException` is thrown if the parameter sent to the method is not greater than or equal to 0.

```
public ItemList(int size) {

    if ( size < 0 ) {
        5%

        throw new IllegalArgumentException("Size must be at least
0. " );
        5%          5%
    }

    list = new Object[size];
}
```

7. (15%) Name the three standard I/O streams (5% each):

System.in

System.out

System.err

8. (15%) Name one of the two sorting algorithms discussed during lecture:

Answer: selection sort (or insertion sort)

9. (15%) Name one of the two searching algorithms discussed during lecture:

Answer: linear search (or binary search)